

AMENDMENTS TO THE CLAIMS

Claims 1-6 (cancelled)

7. **(currently amended)** A method of detecting a first target sequence comprising a first target domain, a second adjacent target domain and a single stranded poly(A) sequence, said method comprising:

- a) hybridizing a first probe comprising:
 - i) an upstream universal priming site (UUP); and
 - ii) a first target-specific sequence substantially complementary to said first target domain; to said first target domain;
- b) hybridizing a second probe comprising:
 - iii) a second target-specific sequence substantially complementary to said second adjacent target domain;
 - iv) a downstream universal priming site (DUP); to said second adjacent target domain;

wherein at least one of said first and second probes comprises at least a first adapter sequence; , said poly (A) sequence remains single-stranded, and wherein said target sequence and said first and second probes form a ligation complex;

c) contacting said ligation complex with a ligase to form a ligated complex;

d) contacting said ligated complex with a support comprising a poly(T) sequence, such that said single stranded poly(A) sequence hybridizes with said poly(T) sequence;

- e) removing unhybridized first and second probe sequences;
- f) denaturing said ligation complex;
- g) amplifying the ligated first and second probes to generate a plurality of amplicons;
- h) contacting said amplicons with an array of capture probes to form assay complexes; and
- i) detecting said assay complexes.

8. **(original)** A method according to claim 7 wherein said first target domain and said second target domain are directly adjacent.

9. **(original)** A method according to claim 7 wherein said first target domain and said second target domain are separated by at least one base and said method further includes contacting said ligation complex with a polymerase and at least one dNTP.
10. **(previously amended)** A method according to claim 7, 8 or 9 wherein one of said first and second probes comprises a label.
11. **(original)** A method according to claim 10 wherein said label is a primary label.
12. **(original)** A method according to claim 11 wherein said label is a fluorescent label.
- 13-14. **(withdrawn)**
15. **(previously amended)** A method according to claim 7, 8 or 9 wherein said amplifying is done by:
- a) hybridizing a first universal primer to said UUP;
 - b) providing a polymerase and dNTPs such that said first universal primer is extended;
 - c) hybridizing a second universal primer to said DUP;
 - d) providing a polymerase and dNTPs such that said second universal primer is extended; and
 - e) repeating steps a) through d).
16. **(previously amended)** A method according to claim 7 wherein said array comprises:
- a) a substrate with a patterned surface comprising discrete sites; and
 - b) a population of microspheres comprising at least a first subpopulation comprising a first capture probe and a second subpopulation comprising a second capture probe.
17. **(original)** A method according to claim 16 wherein said discrete sites comprise wells.
18. **(original)** A method according to claim 16 wherein said substrate comprises a fiber optic bundle.
19. **(currently amended)** A method according to claim 7, 8 or 9 wherein said support ~~comprising a poly(T) sequence~~ comprises magnetic beads comprising a poly(T) sequence.
20. **(previously added)** A method according to claim 15 wherein at least one of said first universal primers and said second universal primer comprises a label.